

(A) an individual institution of higher education;

- (B) a nonprofit entity; or
- (C) a consortium that—

(i) shall include and be led by an institution of higher education or by a nonprofit entity, designed to support technology development;

(ii) shall include 1 or more institution that is—

(I) a historically Black college or university;

(II) a Tribal College or University;

(III) a minority-serving institution (or an institution of higher education with an established STEM capacity building program focused on traditionally underrepresented populations in STEM, including Native Hawaiians, Alaska Natives, and other Indians);

(IV) an institution that participates in the Established Program to Stimulate Competitive Research under section 113 of the National Science Foundation Authorization Act of 1988 (42 U.S.C. 1862g);

(V) an emerging research institution; or

(VI) a community college; and

(iii) may include 1 or more—

(I) additional entities described in subparagraph (A) or (B);

(II) industry entities, including startups, small businesses, and public private partnerships;

(III) economic development organizations or venture development organizations, as such terms are defined in section 28(a) of the Stevenson-Wylder Technology Innovation Act of 1980 (15 U.S.C. 13701 et seq.), as amended by section 2401 of this Act;

(IV) National Laboratories;

(V) Federal laboratories, as defined in section 4 of the Stevenson-Wylder Technology Innovation Act of 1980 (15 U.S.C. 3703);

(VI) Federal research facilities;

(VII) labor organizations;

(VIII) entities described in subparagraph (A) or (B) from allied or partner countries;

(IX) other entities if determined by the Director to be vital to the success of the program; and

(X) binational research and development foundations and funds, excluding foreign entities of concern, as defined in section 2307.

(8) TRAINEE DEVELOPMENT PILOT PROGRAM.—

(A) ESTABLISHMENT OF PILOT PROGRAM.—At not more than 3 university technology centers that are consortia under paragraph (7)(C), the Director may include support for trainee development under the leadership of a member of the consortium that is an institution described under paragraph (7)(C)(ii). Such programs shall be selected to ensure geographical diversity and service to populations underrepresented in STEM fields, and shall perform the following activities:

(i) Training and technical assistance for graduate students and postdoctoral researchers on—

(I) researching and assessing available grant and fellowship opportunities;

(II) preparing and submitting grants and fellowship applications that leverage their research and experience; and

(III) administering grant funding, and leveraging grants and fellowships into longer term employment opportunities.

(ii) Establishing professional mentoring networks that include Federal, State, local, and Tribal government agencies and the private sector, as well as members of the regional technology hubs established under section 28(b)(1)(A) of the Stevenson-Wylder Technology Innovation Act of 1980 (Public Law 96-480; 15 U.S.C. 3701 et seq.).

(iii) Other support determined to be necessary or advisable by the Director to achieve the purposes of this title.

(B) ASSESSMENT.—Not later than 5 years after the date of enactment of this Act, the Foundation shall assess the impacts of the trainee development programs established under this paragraph and report its findings to Congress. Such assessment shall include perspectives from participating graduate students and postdoctoral researchers.

SA 1808. Mr. MANCHIN (for himself and Mr. BARRASSO) submitted an amendment intended to be proposed to amendment SA 1502 proposed by Mr. SCHUMER to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

At the appropriate place in title III of division F, insert the following:

SECTION 63. PROPERTY INTERESTS RELATING TO CERTAIN PROJECTS AND PROTECTION OF INFORMATION RELATING TO CERTAIN AGREEMENTS.

(a) PROPERTY INTERESTS RELATING TO FEDERALLY FUNDED ADVANCED NUCLEAR REACTOR PROJECTS.—

(1) DEFINITIONS.—In this section:

(A) ADVANCED NUCLEAR REACTOR.—The term “advanced nuclear reactor” has the meaning given the term in section 951(b) of the Energy Policy Act of 2005 (42 U.S.C. 16271(b)).

(B) DEPARTMENT.—The term “Department” means the Department of Energy.

(C) PROPERTY INTEREST.—

(i) IN GENERAL.—Except as provided in clause (ii), the term “property interest” means any interest in real property or personal property (as those terms are defined in section 200.1 of title 2, Code of Federal Regulations (as in effect on the date of enactment of this Act)).

(ii) EXCLUSION.—The term “property interest” does not include any interest in intellectual property developed using funding provided under a project described in paragraph (3).

(D) SECRETARY.—The term “Secretary” means the Secretary of Energy.

(2) ASSIGNMENT OF PROPERTY INTERESTS.—The Secretary may assign to any entity, including the United States, fee title or any other property interest acquired by the Secretary under an agreement entered into with respect to a project described in paragraph (3).

(3) PROJECT DESCRIBED.—A project referred to in paragraph (2) is—

(A) a project for which funding is provided pursuant to the funding opportunity announcement of the Department numbered DE-FOA-0002271, including any project for which funding has been provided pursuant to that announcement as of the date of enactment of this Act;

(B) any other project for which funding is provided using amounts made available for the Advanced Reactor Demonstration Program of the Department under the heading “NUCLEAR ENERGY” under the heading “ENERGY PROGRAMS” in title III of division C of the Further Consolidated Appropriations Act, 2020 (Public Law 116-94; 133 Stat. 2670);

(C) any other project for which Federal funding is provided under the Advanced Reactor Demonstration Program of the Department; or

(D) a project—

(i) relating to advanced nuclear reactors; and

(ii) for which Federal funding is provided under a program that is similar to, or a successor of, the Advanced Reactor Demonstration Program of the Department.

(4) RETROACTIVE VESTING.—The vesting of fee title or any other property interest assigned under paragraph (2) shall be retroactive to the date on which the applicable project first received Federal funding as described in any of subparagraphs (A) through (D) of paragraph (3).

(b) CONSIDERATIONS IN COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.—

(1) IN GENERAL.—Section 12(c)(7)(B) of the Stevenson-Wylder Technology Innovation Act of 1980 (15 U.S.C. 3710a(c)(7)(B)) is amended—

(A) by inserting “(i)” after “(B)”;

(B) in clause (i), as so designated, by striking “The director” and inserting “Subject to clause (ii), the director”; and

(C) by adding at the end the following:

“(II) The agency may authorize the director to provide appropriate protections against dissemination described in clause (i) for a total period of not more than 30 years if the agency determines that the nature of the information protected against dissemination, including nuclear technology, could reasonably require an extended period of that protection to reach commercialization.”.

(2) APPLICABILITY.—

(A) DEFINITION.—In this subsection, the term “cooperative research and development agreement” has the meaning given the term in section 12(d) of the Stevenson-Wylder Technology Innovation Act of 1980 (15 U.S.C. 3710a(d)).

(B) RETROACTIVE EFFECT.—Clause (ii) of section 12(c)(7)(B) of the Stevenson-Wylder Technology Innovation Act of 1980 (15 U.S.C. 3710a(c)(7)(B)), as added by subsection (a) of this section, shall apply with respect to any cooperative research and development agreement that is in effect as of the day before the date of enactment of this Act.

(c) DEPARTMENT OF ENERGY CONTRACTS.—Section 646(g)(5) of the Department of Energy Organization Act (42 U.S.C. 7256(g)(5)) is amended—

(1) by striking “(5) The Secretary” and inserting the following:

“(5) PROTECTION FROM DISCLOSURE.—

“(A) IN GENERAL.—The Secretary”; and

(2) in subparagraph (A) (as so designated)—

(A) by striking “, for up to 5 years after the date on which the information is developed.”; and

(B) by striking “agency.” and inserting the following: “agency—

“(i) for up to 5 years after the date on which the information is developed; or

“(ii) for up to 30 years after the date on which the information is developed, if the Secretary determines that the nature of the technology under the transaction, including nuclear technology, could reasonably require an extended period of protection from disclosure to reach commercialization.

“(B) EXTENSION DURING TERM.—The Secretary may extend the period of protection from disclosure during the term of any transaction described in subparagraph (A) in accordance with that subparagraph.”.

SA 1809. Mr. MANCHIN (for himself and Mr. BARRASSO) submitted an amendment intended to be proposed to amendment SA 1502 proposed by Mr. SCHUMER to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a

strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

At the appropriate place in title V of division B, insert the following:

SEC. 25 . UNIVERSITY INFRASTRUCTURE REVITALIZATION PROGRAM.

(a) PURPOSES.—The purposes of this section are—

(1) to upgrade and expand nuclear research capabilities of universities in the United States to meet the research requirements of advanced nuclear energy systems;

(2) to establish regional nuclear innovation hubs and university-led consortia to support innovation in nuclear science and engineering and related disciplines; and

(3) to ensure the continued operation of university research reactors.

(b) DEFINITIONS.—In this section:

(1) ADVANCED NUCLEAR REACTOR.—The term “advanced nuclear reactor” has the meaning given the term in section 951(b) of the Energy Policy Act of 2005 (42 U.S.C. 16271(b)).

(2) EPSCoR UNIVERSITY.—The term “EPSCoR university” means an institution of higher education that participates in the Established Program to Stimulate Competitive Research Federal-State partnership program designed to enhance the capabilities of universities to conduct sustainable and nationally competitive energy-related research administered by the Department of Energy.

(3) HISTORICALLY BLACK COLLEGE OR UNIVERSITY.—The term “historically Black college or university” has the meaning given the term “part B institution” in section 322 of the Higher Education Act of 1965 (20 U.S.C. 1061).

(4) INSTITUTION OF HIGHER EDUCATION.—The term “institution of higher education” has the meaning given the term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(5) MINORITY-SERVING INSTITUTION.—The term “minority-serving institution” has the meaning given the term “minority institution” in section 365 of the Higher Education Act of 1965 (20 U.S.C. 1067k).

(6) NATIONAL LABORATORY.—The term “National Laboratory” has the meaning given the term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

(7) PROGRAM.—The term “program” means the University Infrastructure Revitalization Program established under subsection (c).

(8) SECRETARY.—The term “Secretary” means the Secretary of Energy.

(c) ESTABLISHMENT OF PROGRAM.—Not later than 120 days after the date of enactment of this Act, the Secretary shall establish a program, to be known as the “University Infrastructure Revitalization Program”, to promote collaborations, partnerships, and knowledge sharing between institutions of higher education, including EPSCoR universities, historically Black colleges and universities, and minority-serving institutions, National Laboratories, industry, and associated labor unions with the mission to revitalize and upgrade existing nuclear science and engineering infrastructure and develop new capabilities and expertise to support the development of advanced nuclear reactor technologies and applications.

(d) CONSORTIA.—

(1) IN GENERAL.—In carrying out the program, the Secretary shall establish university-led consortia comprised of institutions of higher education, including EPSCoR universities, historically Black colleges and universities, and minority-serving institu-

tions, National Laboratories, industry, and associated labor unions to enhance university-based nuclear science and engineering infrastructure.

(2) ACTIVITIES.—The Secretary shall competitively award to consortia established under paragraph (1) awards—

(A) to enhance existing capabilities and establish new capabilities and expertise;

(B) to provide project management services and support, technical support, quality engineering and inspections, and nuclear material support to—

(i) existing university nuclear science and engineering programs in the United States as of the date of enactment of this Act;

(ii) the 25 existing research reactors at universities in the United States as of the date of enactment of this Act; and

(iii) new and emerging nuclear science and engineering programs at institutions of higher education, including—

(I) EPSCoR universities;

(II) historically Black colleges and universities; and

(III) minority-serving institutions.

(e) FUNDING.—Notwithstanding any other provision of this Act, out of any amounts appropriated pursuant to section 2117(a), there shall be made available to the Secretary to carry out this section \$50,000,000 for each of fiscal years 2022 through 2026.

SA 1810. Mr. GRASSLEY (for himself, Ms. HASSAN, Mr. CORNYN, and Mrs. SHAHEEN) submitted an amendment intended to be proposed to amendment SA 1502 proposed by Mr. SCHUMER to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

At the appropriate place, insert the following:

SEC. . EXTENSION OF TEMPORARY ORDER FOR FENTANYL-RELATED SUBSTANCES.

(a) IN GENERAL.—Section 2 of the Temporary Reauthorization and Study of the Emergency Scheduling of Fentanyl Analogues Act (Public Law 116–114; 134 Stat. 103) is amended by striking “October 22, 2021” and inserting “December 16, 2022”.

(b) APPLICABILITY.—The amendment made by subsection (a) shall take effect as if enacted as part of the Temporary Reauthorization and Study of the Emergency Scheduling of Fentanyl Analogues Act (Public Law 116–114; 134 Stat. 103).

SA 1811. Mr. DURBIN (for himself and Ms. MURKOWSKI) submitted an amendment intended to be proposed to amendment SA 1502 proposed by Mr. SCHUMER to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

Strike section 2214 and insert the following:

SEC. 2214. CRITICAL MINERALS MINING, RECYCLING, AND ALTERNATIVE TECHNOLOGIES RESEARCH.

(a) CRITICAL MINERALS MINING, RECYCLING, AND ALTERNATIVE TECHNOLOGIES RESEARCH AND DEVELOPMENT AT THE FOUNDATION.—

(1) IN GENERAL.—In order to support supply chain resiliency and reduce the environmental impacts of critical minerals mining, the Director shall issue awards, on a competitive basis, to institutions of higher education, nonprofit organizations, or National Laboratories (or consortia of such institutions or organizations, including consortia that collaborate with private industry) to support basic research that will accelerate innovation to advance critical minerals mining, recycling, and reclamation strategies and technologies for the purpose of making better use of domestic resources, finding alternative technologies, and eliminating national reliance on minerals and mineral materials that are subject to supply disruptions.

(2) USE OF FUNDS.—Activities funded by an award under this section may include—

(A) advancing mining research and development activities to develop new mapping and mining technologies and techniques, including advanced critical mineral extraction and production, to improve existing or to develop new supply chains of critical minerals, and to yield more efficient, economical, and environmentally benign mining practices;

(B) advancing critical mineral processing research activities to improve separation, alloying, manufacturing, or recycling techniques and technologies that can decrease the energy intensity, waste, potential environmental impact, and costs of those activities;

(C) advancing research and development of critical minerals mining and recycling technologies that take into account the potential end-uses and disposal of critical minerals, in order to improve end-to-end integration of mining and technological applications;

(D) conducting research and development on alternative technologies, such as in battery or energy storage technologies that minimize or do not incorporate critical minerals;

(E) conducting long-term earth observation of reclaimed mine sites, including the study of the evolution of microbial diversity at such sites;

(F) examining the application of artificial intelligence for geological exploration of critical minerals, including what size and diversity of data sets would be required;

(G) examining the application of machine learning for detection and sorting of critical minerals, including what size and diversity of data sets would be required;

(H) conducting detailed isotope studies of critical minerals and the development of more refined geologic models; or

(I) providing training and research opportunities to undergraduate and graduate students to prepare the next generation of mining engineers and researchers.

(b) CRITICAL MINERALS INTERAGENCY SUBCOMMITTEE.—

(1) IN GENERAL.—In order to support supply chain resiliency, the Critical Minerals Subcommittee of the National Science and Technology Council (referred to in this subsection as the “Subcommittee”) shall coordinate Federal science and technology efforts to ensure secure and reliable supplies of critical minerals to the United States.

(2) PURPOSES.—The purposes of the Subcommittee shall be—

(A) to advise and assist the Committee on Homeland and National Security and the National Science and Technology Council on United States policies, procedures, and plans as it relates to critical minerals, including—